

The present invention relates to beers in which a characteristic haze is purposefully imbued by way of addition of pectin. The resulting beer is cloudy owing to the characteristic turbidity that is caused by unsettled particulate (e.g. proteinaceous) matter.

As disclosed on page one of the present application, such "hazy" beers are the antithesis of the "Pils-type" or more generally speaking "lager" type beers. In such lager beers generally, haze, turbidity and cloudiness are synonymous with quality defects. Substantial effort is applied by brewers to avoid such defects in these characteristically crystal clear lager products.

Pils-type beer production employs a series of steps designed to obtain a beer which is as clear (i.e. haze-free) as possible. These various steps include precipitation, absorption, centrifugation and filtration of the beer/wort. In fact, the "lagering" process (from which the general class that includes Pils beers, gets its name), is further exemplary of such a clarification process. The Association of Brewers', *"Dictionary of Beer and Brewing"*, ISBN 0-937381-10-1, 1988, defines lagering as storage of beer in cold cellars at near-zero temperatures for periods of time ranging typically from a few weeks to several months and occasionally up to a year, during which time the yeast cells

combinations during the production of lager beers are mentioned in the above cited dictionary also which defines clarification as: the process of removing suspended particles from the cloudy wort or the finished beer through mechanical (filtration, centrifugation) or chemical means (adding enzymes or flocculating agents).

USSR Inventor's Certificate 685689 discloses the use of liquorice root to improve foam characteristics, particularly when used in combination with pectin.

This reference does not, however, disclose or otherwise teach the use of pectin to produce haze characteristics in a finished beer. It is concerned only with the production of stable foam heads.

Moreover, the teachings of the reference are the anti-thesis of the presently claimed invention because the foam-enhanced beer, if not a Pils *per se*, is certainly a lager or, in any case, a clarified beer. Lagering, clarification and filtration treatments are all employed in the teachings of the reference, any one, and certainly all of which, are designed to remove cloudiness or haze or turbidity. The Examiner's attention is drawn to the many references to clarification, filtration and lagering that are repeated throughout this cited document, such as: "it is clarified, cooled and fermented, and the resultant young beer is held

as usual"; and, "the wort is then clarified, fermented and passed to the lagering cellar".

The removal/avoidance of haze teaches diametrically away from the present invention.

Lastly, the stated objective of the cited reference is to "improve the quality of the finished product". Given the unavoidable conclusion that this finished product is a clarified beer, (and indeed a lager such as a Pils), it is inconceivable that persons skilled in the art would be directed to add pectin to create haze in beer products whose quality is defined *inter alia*, by clarity and the absence of haze. Of a certainty, the production of a haze in such a beer would not "improve the quality of the finished product" of the prior art.

It is well settled that references which teach away from an invention cannot be a substantive impediment to its patentability. Reconsideration of the relevance of the Soviet certificate, with a view to the allowance of the broad aspects of the presently claimed invention, is therefore respectfully requested.

Should the Examiner believe an additional amendment is needed to place the case in condition for allowance, he is hereby invited to contact Applicants' attorney at the telephone number listed below.

Commissioner determine that an additional fee is due, he is hereby authorized to charge said fee to Deposit Account No. 02-0184.

Respectfully submitted,

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